

CLAIMS:

1. A method to manage a packet array, comprising:

receiving a packet by a device driver;

5 setting a resource state for said packet;

adding said packet to a packet array; and

indicating said packet array to a protocol stack based on said resource state.

2. The method of claim 1, wherein said setting comprises:

10 determining a resource state for said device driver;

comparing said resource state to a predetermined threshold; and

setting a resource state indicator in accordance with said comparison.

3. The method of claim 2, wherein said setting said resource state indicator in

15 accordance with said comparison comprises:

setting said resource state indicator to normal if said resource state is above or  
equal to said predetermined threshold; and

setting said resource state indicator to low if said resource state is below said  
predetermined threshold.

20

4. The method of claim 3, wherein said indicating comprises indicating said packet  
array to said protocol stack if said resource state indicator is set to low.

5. The method of claim 1, wherein said packet array has a length of 1-N.

6. The method of claim 1, wherein said packet array is stored in a first buffer.

5 7. The method of claim 1, wherein said resource state indicator is an explicit resource state indicator.

8. The method of claim 7, further comprising:

receiving said packet array;

10 determining an implicit resource state for each packet in said packet array; and

copying each packet having an implicit resource state below a predetermined threshold from said first buffer to a second buffer.

9. The method of claim 8, wherein said packets are ordered from 1-N in said packet  
15 array, and determining said implicit resource state comprises:

retrieving each packet in order from said packet array;

determining that said implicit resource state is normal for each packet if said explicit resource state indicator is normal; and

determining that said implicit resource state is low for any remaining packets in  
20 said packet array if said explicit resource state indicator is low.

10. An article comprising:

a storage medium;

said storage medium including stored instructions that, when executed by a processor, result in managing a packet array by receiving a packet by a device driver,  
5 setting a resource state for said packet, adding said packet to a packet array, and indicating said packet array to a protocol stack based on said resource state.

11. The article of claim 10, wherein the stored instructions, when executed by a

processor, further result in setting said resource state for said packet by determining a  
10 resource state for said device driver, comparing said resource state to a predetermined threshold, and setting a resource state indicator in accordance with said comparison.

12. The article of claim 11, wherein the stored instructions, when executed by a

processor, further result in setting said resource state indicator in accordance with said  
15 comparison by setting said resource state indicator to normal if said resource state is above or equal to said predetermined threshold, and setting said resource state indicator to low if said resource state is below said predetermined threshold.

13. The article of claim 12, wherein the stored instructions, when executed by a

20 processor, further result in indicating said packet array to said protocol stack if said resource state indicator is set to low.

14. The article of claim 10, wherein the stored instructions, when executed by a processor, further result in said packet array having a length of 1-N.

15. The article of claim 10, wherein the stored instructions, when executed by a processor, further result in storing said packet array in a first buffer.

16. The article of claim 10, wherein the stored instructions, when executed by a processor, further result in said resource state indicator being an explicit resource state indicator.

17. The article of claim 16, wherein the stored instructions, when executed by a processor, further result in receiving said packet array, determining an implicit resource state for each packet in said packet array, and copying each packet having an implicit resource state below a predetermined threshold from said first buffer to a second buffer.

18. A device driver for a network operating system, comprising:

a packet array construction module to construct a packet array based on an explicit resource status for at least one packet, and to store said packet array in a first buffer; and

a protocol interface to determine an implicit resource status for each packet in said packet array based on said explicit resource status of at least one packet, and to copy each packet from said first buffer to a second buffer based on said implicit resource status.

19. The device driver of claim 18, wherein said packet array construction module truncates said packet array if said explicit resource status for a packet is set to low.